



GOVERNMENT OF INDIA
MINISTRY OF
COMMERCE & INDUSTRY

PTB. 207 (N)
713

Report
OF THE
INDIAN TARIFF BOARD
ON THE
**MACHINE SCREW
INDUSTRY**

BOMBAY

1951

PRINTED IN INDIA BY THE MANAGER GOVT. OF INDIA PRESS, NEW DELHI
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147 CP

(A) New Cases

	Symbol	No.
1. Sodium thiosulphate, sodium sulphite (anhydrous) and sodium bisulphite (1946)	PTB	156
2. Dichromates (1946)	PTB	157
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GOVERNMENT OF INDIA
MINISTRY OF COMMERCE AND INDUSTRY



सत्यमेव जयते

REPORT OF THE
INDIAN TARIFF BOARD
ON THE

MACHINE SCREW INDUSTRY

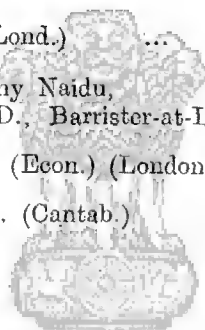
BOMBAY

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PERSONNEL OF THE BOARD

Dr. H. L. Dey, D.Sc. (Lond.)	...	<i>President.</i>
Dr. B. V. Narayanaswamy Naidu, M.A., B.Com., Ph.D., Barrister-at-Law.	...	<i>Member.</i>
Mr. M. A. Mulky, M.Sc. (Econ.) (London).	...	<i>Secretary.</i>
Mr. B. N. Adarkar, M.A. (Cantab.)	...	<i>Member.</i>



सत्यमेव जयते

GOVERNMENT OF INDIA
MINISTRY OF COMMERCE AND INDUSTRY

DRAFT RESOLUTION

TARIFFS

New Delhi, the 1st December, 1951

No. 18(2)-T.B./51.—The Tariff Board was asked to investigate the claim of the machine screw industry for protection and assistance. The Board having considered the matter has submitted its report and made the following recommendations:—

(i) Iron and Steel machine screws should be shown against a new item in the Tariff Schedule and a protective duty at the rate of 30 per cent. *ad valorem* (or 31½ per cent. inclusive of surcharge) be levied thereon in place of the existing maximum duty of Rs. 46/9/- per ton.

(ii) The protective duty recommended should remain in force for a period of 3 years.

(iii) No concession in respect of import duty on raw materials is necessary.

(iv) Sufficient imports of die steel and special steels should be permitted so as to meet the requirements of domestic industries including the machine screw industry.

(v) Government should give the manufacturers of machine screws reasonable facilities for the import of special types of machinery required for the manufacture of machine screws.

(vi) The Central and the State Governments should endeavour to meet the requirements of the indigenous machine screw industry for steel and mild steel wire to as large an extent as possible, and also take suitable steps to ensure prompt deliveries.

(vii) Government Departments should, as far as possible, obtain their requirements of machine screws from indigenous producers provided the quality is satisfactory and the price is reasonable.

(viii) Since most of the demand in the country for the type of machine screws within the scope of the enquiry can be met by the indigenous manufacturers, the desirability of maintaining and expanding the indigenous production of machine screws should be kept in view and the quantum of imports regulated accordingly so long as the policy of licensing imports has to be continued for balance of payments considerations.

(ix) Arrangements should be made with the Director General of Commercial Intelligence and Statistics and the Collectors of Customs to record,

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in future, imports of machine screws separately under the following heads:—

Machine Screws:—

- (1) Iron or Steel;
- (2) Brass;
- (3) Other non-ferrous metals.

(x) There is still considerable scope for improvement and with improved equipment, better technical supervision and an adequate provision for research, the industry can turn out a product which will give still greater satisfaction to the consumer.

(xi) The Indian Standards Institution should take up the question of evolving standard specifications for the products of this industry at an early date.

(xii) The producers of machine screws should approach the National Metallurgical Laboratory, Tatanagar, for assistance in testing the materials to be used in the manufacture of different types of machine screws.

(xiii) The industry should take steps to diversify its production by undertaking the manufacture of such varieties of machine screws as are not produced at present.

(xiv) The machine screw industry should pay greater attention to developing a proper marketing organisation.

(xv) The manufacturers of machine screws should take up the matter of transport facilities and concessions directly with the transport authorities concerned.

(xvi) The firms manufacturing machine screws in the country should take early steps to convert themselves into public limited companies.

(xvii) The industry should make arrangements to pool the requirements of individual factories for the raw materials and place bulk orders with the manufacturers.

(xviii) All the units in the industry should submit progress reports to the Board by 31st January of every year or at such shorter intervals as the Board may indicate later, giving information regarding production, sales, stocks, cost of production and selling prices. Such reports should also include information regarding the supply of raw materials, the landed costs and selling prices of the imported products and other factors having a bearing on the competitive position of the industry.

2. Government accept the recommendations of the Board. Steps are being taken to implement recommendations (i) and (ii).

Recommendations (iv), (v), (vi), (vii), (viii), (ix) and (xi) will be given effect to, as far as possible.

3. The attention of the industry is invited to recommendations (x), (xii), (xiii), (xiv), (xv), (xvi), (xvii) and (xviii).

S. A. VENKATARAMAN,
Secretary to the Government of India.

GOVERNMENT OF INDIA
MINISTRY OF COMMERCE & INDUSTRY

DRAFT NOTIFICATION

TARIFFS

New Delhi, the 1st December 1951

No. 18(2)-T.B./51.—In exercise of the powers conferred by section 3A of the Indian Tariff Act, 1934 (XXXII of 1934), the Central Government hereby raises to 31½ per cent *ad valorem* the customs duty on iron or steel machine screws, whether or not of British manufacture, leviable under item 63(12) of the First Schedule to the said Act and any other law for the time being in force.

S. A. VENKATARAMAN,

Secretary to the Government of India.

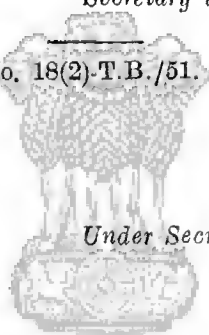
No. 18(2)-T.B./51.

Copy to all concerned.

By Order, etc.,

W. A. ROSE,

Under Secretary to the Govt. of India.



सत्यमेव जयते

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सत्यमेव जयते

REPORT ON THE MACHINE SCREW INDUSTRY

The claim of the machine screw industry for protection or assistance was referred to the Tariff Board for investigation by the Government of India (in the late Ministry of Commerce) Resolution No. 1-T/A(58)/49, dated 2nd December, 1950 (*vide* Appendix I), read with paragraphs 2 and 7 of their Resolution No. 218-T(55)/45, dated 3rd November, 1945, and paragraph 4 of their Resolution bearing the same number, dated 16th February, 1946. This reference to the Board was made on the basis of the applications for protection made to the late Ministry of Commerce, Government of India, by—

- (i) Jagatjit Engineering Works, Kapurthala, in their letters No. Gen/Mc/4740, dated 28th November, 1949, and 15th September, 1950, respectively;
- (ii) Universal Screw Factory, Chichearta, Amritsar, in their letters Nos. 62/3224, 62/3992 and 62/5316, dated 26th May, 1950, 28th June, 1950, and 1st September, 1950, respectively; and
- (iii) Screw Manufacturers' Association, Calcutta, in their letter No. Screw/F.4/355, dated 16th October, 1950.

2 Under the Board's terms of reference, as contained in paragraph 5 of the late Department of Commerce Resolution No. 218-T(55)/45, of 3rd November, 1945, the Board has to satisfy itself:—

- (1) that the industry is established and conducted on sound business lines; and
- (2) (a) that, having regard to the natural or economic advantages enjoyed by the industry and its actual or probable costs, it is likely within a reasonable time to develop sufficiently to be able to carry on successfully without protection or State assistance; or
- (b) that it is an industry to which it is desirable in the national interest to grant protection or assistance and that the probable cost of such protection or assistance to the community is not excessive.

Where a claim to protection or assistance is found to be established *i.e.*, if condition (1) and condition (2) (a) or (b) are satisfied, the Board will recommend:—

- (i) whether, at what rate and in respect of what articles, or class or description of articles, a protective duty should be imposed;
- (ii) what additional or alternative measures should be taken to protect or assist the industry; and
- (iii) for what period, not exceeding three years, the tariff or other measures recommended should remain in force.

In making its recommendations, the Board has to give due weight to the interests of the consumer in the light of the prevailing conditions and also consider how the recommendations affect industries using the articles in respect of which protection is to be granted.

3. (a) On 4th April, 1951, the Board issued questionnaires to all the known manufacturers of machine screws and Associations of manufacturers. Questionnaires were also issued to the principal consumers of machine screws on 28th April, 1951, and to importers on 4th May, 1951. The Board also addressed the All India Manufacturers' Organization, Bombay, and the State Governments inviting their views on the question of protection or assistance to the industry. The late Director-General of Industries and Supplies was also requested to furnish a memorandum on the subject of the inquiry. The Collectors of Customs were requested to furnish information regarding the c. i. f. prices of imported machine screws and statistics of imports. Information regarding the import and export control policy relating to machine screws was obtained from the Chief Controller of Imports and Chief Controller of Exports respectively. A list of persons or bodies to whom the Board's questionnaires were issued and from whom replies or memoranda were received is given in Appendix II. On 11th May, 1951, the Board issued a press communiqué requesting persons or Associations desiring to express their views on the question of protection or assistance to the machine screw industry to send their representations to the Board for consideration.

(b) Shri R. Sundaram, Cost Accounts Officer attached to the Board, visited the following factories on the dates shown against each and examined the cost of production of machine screws manufactured by them :—

(i) Jagatjit Engineering Works, Kapurthala, 28rd to 27th May, 1951.

(ii) Universal Screw Factory, Chheharta, Amritsar, 27th to 30th May, 1951.

(c) Dr. H. L. Dey, President, visited Calcutta on 18th June, 1951, and held discussions with the representatives of the Screw Manufacturers' Association, Calcutta, and Messrs. Guest, Keen, Williams, Ltd., Calcutta, on various points relating to this inquiry. Dr. B. V. Narayana-swamy Naidu, Member, accompanied by Shri B. R. Sehgal, Assistant Secretary, visited the following factories in Kapurthala and Amritsar on 5th July, 1951 :—

(i) Jagatjit Engineering Works, Kapurthala.

(ii) Universal Screw Factory, Chheharta, Amritsar.

(iii) K. B. Engineering Co., Ltd., Amritsar.

(iv) Tee Tee Industries Amritsar.

Shri B. R. Sehgal visited the factory of Northern India Steel Works Ltd., Amritsar, on 6th July, 1951.

Dr. Naidu had discussions at Amritsar with certain producers of machine screws in the Punjab and with the representatives of the Screw Manufacturers' Association, Calcutta, and the Bharat Screw Manufacturers' Association, Amritsar, on the question of protection or assistance to this industry.

(d) A public inquiry was held on 13th July, 1951, at the Board's office in Bombay. A list of those who attended the public inquiry and gave evidence is given in Appendix III.

4. (a) Before discussing the scope of this inquiry, it is necessary to arrive at a clear definition of a machine screw, as distinct from similar other articles, such as wood screws, bolts, etc. Hitherto, machine screws made of iron or steel have not been separately specified in the Indian Customs Tariff, but are assessed to duty under Item No. 63(12) (A) which relates to bolts and nuts. The Customs authorities have defined the term 'Bolt' as including any screw designed to fit a female thread made otherwise than by its own action'. This definition covers machine screws as well, which are consequently assessed to duty at the same rate as bolts. We understand from the Assistant Collector of Customs, Bombay, that in the Bombay Customs office statistics of imports of iron or steel machine screws are not kept separately but are included in those relating to 'bolts and nuts'. The Sea-borne Trade Statistics include an item called 'metal thread screws', but imports of iron or steel machine screws are not included in this item. The subject was discussed at the public inquiry and it was agreed that machine screws should be distinguished from both wood screws and bolts by the following characteristics: Machine screws are made for use in metallic parts, while wood screws are designed for use in wooden articles. Consequently, a machine screw has a uniform shank which is fully threaded up to the head, while in the case of a wood screw, the shank always tapers towards the end and is generally threaded upto two-thirds of its length. A bolt is different from a machine screw in that though its shank is uniform in diameter, only a portion of the shank is threaded, leaving an unthreaded collar near the head.

(b) In the late Ministry of Commerce Resolution No. 1-T/A(58)/49, dated 2nd December, 1950, referring this case to the Board, the industry has been described in general terms and the reference would, therefore, seem to include all types of machine screws. In the course of our inquiry, however, we were informed that there were many different varieties of machine screws, varying according to material, thread, type of head and finish. A list of some of the different types of machine screws manufactured from different materials by Messrs. Guest, Keen and Nettlefolds (Midlands) Ltd., Birmingham, who are one of the biggest producers and exporters of machine screws in the United Kingdom, is given in Appendix IV. It will be seen from this list that in foreign countries machine screws are made from mild steel, brass, gunmetal and other materials. Machine screws are, however, principally classified according to the types of heads and the principal types entering into world commerce are as follows:—

- (i) Countersunk Head;
- (ii) Round Head;
- (iii) Raised or instrument Head;
- (iv) Cheese Head;
- (v) Fillister Head;
- (vi) Mushroom Head;
- (vii) Binding Head;
- (viii) Square Head; and
- (ix) Hexagon Head.

Under each category, there are variations according to the kind of finish. The sizes of machine screws vary according to diameter and length. As regards the types of thread, a distinction is made between cut-thread and rolled-thread machine screws. Moreover, the types of threads are standardized in the United Kingdom and in the United States of America. The following are the main standards adopted by British and American manufacturers:—

British standards:—

- (i) B. S. W. (British Standard Whitworth).
- (ii) B. S. F. (British Standard Fine).
- (iii) B. S. C. (British Standard Cycle).
- (iv) B. A. (British Association).

American standards:—

- (i) S. A. E. (Society of Automotive Engineers).
- (ii) A. N. F. (American National Fine).
- (iii) A. N. C. (American National Coarse).

Unified standards:—

- (i) U. N. F. (Unified Fine).
- (ii) U. N. C. (Unified Coarse).
- (iii) U. N. S. (Unified Special).

The American A. N. F. and A. N. C. threads are similar to the British B. S. F. and B. S. W. threads respectively. The Unified Fine, Unified Coarse and Unified Special threads are attempts at evolving unified standard threads acceptable to manufacturers in the United Kingdom and the United States of America.

(c) It was agreed at the public inquiry that indigenous production was confined to the manufacture of machine screws from mild steel and brass only. It was stated that from these materials machine screws in different kinds of finish could be produced according to demand. Brass machine screws are subject to a protective duty of 31½ per cent. *ad valorem* under Item No. 70 of the Indian Customs Tariff which relates to 'Brass, wrought and manufactures thereof not otherwise specified'. Machine screws made from other metals (excluding iron and steel) such as gunmetal, are also subject to the same rate of protective duty under Item No. 70(1) which relates to 'all non-ferrous alloys and manufactures of metals and alloys not otherwise specified'. As already stated, iron or steel machine screws are assessed to duty at the rate applicable to 'bolts'. The indigenous producers stated that they were at present interested only in the following types of heads:—

- (i) Countersunk Head;
- (ii) Round Head;
- (iii) Raised or instrument Head;
- (iv) Cheese Head;
- (v) Fillister Head; and
- (vi) Mushroom Head.

Actual production is confined only to the first three types of heads, viz., Countersunk, Round and Raised heads. The producers maintained, however, that they had capacity to manufacture the other three types of heads as well. As regards threads, indigenous machine screws are mostly of the rolled thread variety and the types of threads produced in India conform to the British specifications mentioned above. As regards sizes, the indigenous production is confined to diameters of $1/8''$ to $3/8''$ and lengths of $1/4''$ to $2''$.

It was stated at the public inquiry that the particular sizes of machine screws and types of heads produced in India accounted for 90 per cent. of total indigenous demand for machine screws. The type of head mostly in demand was the round head. The demand for countersunk and raised heads was 25 and 5 per cent. respectively of the total demand. Among the various types of threads, B. S. Whitworth thread, which is produced in India, accounts for 90 per cent. of the total demand. The manufacturer maintained that their existing capacity could be easily adapted to produce the sizes and types of heads of mild steel or brass machine screws not at present produced in India, since the only additional equipment required was suitable dies for threading and heading. The dies are also locally manufactured. The only reasons, according to the manufacturers, why they have not yet undertaken the manufacture of a larger variety of machine screws are the paucity of the raw material and the limitations of home demand. Foreign manufacturers are in a more advantageous position in this respect, since they cater to a much wider market and are, therefore, able to manufacture all types and sizes of machine screws on an economic scale.

We have received representations from certain industries that they require certain special types of machine screws. The Air India Ltd., Bombay, have stated that only machine screws conforming to the Aeronautical Inspection Department Release Note can be used in the aircraft industry. Similarly, Messrs. Godrej and Boyce Manufacturing Co., Ltd., Bombay, have informed us that they require certain special types of machine screws for the manufacture of safes.

(d) In view of what is stated in (b) and (c) above, we have decided to exclude from the scope of our inquiry machine screws made from brass and other non-ferrous metals, since they are already subject to a protective duty, and to confine our inquiry to machine screws made from iron steel in all kinds of finish, with all types of heads and threads, and in all sizes.

5. (a) Machine screws were not manufactured on a commercial scale in this country before World War II. It was only in 1941 that the Universal Screw Factory, Chheharta, Amritsar, started the production of machine screws for the first time in India and this was followed by the Victor Industries, Amritsar, in 1943. During the war, the virtual cessation of imports from abroad, accompanied by the growing demand from the Defence Services, Railways and other consumers, encouraged some enterprising manufacturers in the Punjab to undertake the production of machine screws. The production of wood screws had begun much earlier, in 1939, and the starting of the machine screw industry was greatly facilitated by the fact that, to a certain extent, the same machinery could be used for the manufacture of both wood screws and machine screws. The

History of the industry.

machinery required for the manufacture of both wood screws and machine screws is simple, light, automatic or semi-automatic and is mostly fabricated locally. Even after the cessation of hostilities, conditions remained favourable for the development of the industry and a few machine screw factories came into existence in the Punjab and elsewhere in the immediate post-war period. Latterly, however, only two factories, namely, the Universal Screw Factory, Chheharta, Amritsar, and the Jagatjit Engineering Works, Kapurthala, have been in regular and continuous production. The difficulty of securing the basic raw material, *viz.*, mild steel wire, has been the principal factor compelling most of the other units to close down. We understand that the Victor Industries, National Engineers' Corporation and K. B. Engineering Co., Ltd., all of Amritsar, have discontinued production. On the other hand, two units, namely, Messrs. Bhadwar and Co., and Messrs. Jai Krishna Das both in Delhi and another, Metalfold Industries in Nagpur, have recently installed machinery for the manufacture of machine screws and intend to start production when the raw material is available. The representative of the Screw Manufacturers' Association, Calcutta, stated at the public inquiry that the Hind Wire Industries Ltd., has set up a factory in Calcutta for the manufacture of wood screws and machine screws, and was expected to go into production shortly. It is understood that in the Bombay State, there is only one factory, namely, the Dun Aluminium Factory, Bombay, which has considerable capacity for the manufacture of machine screws. This factory is interested mostly in the production of brass machine screws. During the war, the factory produced a large quantity of machine screws and rivets but it has had no production recently. In Calcutta, Messrs. Guest, Keen, Williams, Ltd., have a factory for the manufacture of machine screws, bolts and nuts, spikes, rivets, etc. Production of machine screws however, forms only a small proportion of their total production. Machine screws are also manufactured by some of the large consuming industries to meet their own requirements. For example, certain cycle and electric fan manufacturers, Government Ordnance factories and the Indian Telephone Industries Ltd., Bangalore, have arrangements for manufacturing machine screws required for their own consumption. The Director-General, Ordnance Factories, has stated that the Ordnance factories sometimes undertake the manufacture of machine screws for civil indentors also, such as Railways, and certain private consumers (*e.g.*, Messrs. Telco and Jessops) as and when surplus capacity is available.

(b) The Industry is at present largely located in the Punjab (I) and to a smaller extent in the Patiala and the East Punjab States Union, Delhi, Calcutta and Bombay. The Punjab (I) has offered a favourable location, mainly because skilled labour is available in that area both to fabricate the screw-making machines and to operate them. There is also an adequate supply of electric power. In respect of the raw material supplies, however, the Punjab factories are at a geographical disadvantage. Mild steel wire, which is the principal raw material, is manufactured by the Indian Steel and Wire Products Ltd., at Indranagar, which is situated at a distance of about 1,140 miles from Amritsar. Moreover, the disturbances which followed in the wake of Partition in 1947 caused a serious dislocation in this industry, from which it is only slowly recovering.

(c) There are two Associations of machine screw manufacturers in India, namely, the Bharat Screw Manufacturers' Association, Amritsar, and the Screw Manufacturers' Association, Calcutta.

6. Machine screws are used in fitting metallic parts and equipment in general engineering, building, furniture and cabinet-ware and allied industries, and generally in all industries requiring fastenings and fittings. The important consumers of machine screws are railways, transport companies, dockyards, coach builders, aircraft builders, manufacturers of all kinds of engineering goods (such as electric motors, fans, transformers, etc.), automobiles, cycles, sewing machines and other kinds of machines.

7. (a) The different stages in the manufacture of machine screws are:—
process of the manufacture.

- (i) wire drawing to the required diameter,
- (ii) heading,
- (iii) slotting,
- (iv) head-turning,
- (v) threading, and
- (vi) cleaning in chemicals.

Mild steel wire or wire of other metals having the required diameter is passed through a heading machine. In this machine, the wire is cut to suitable lengths by means of a cutter and the pieces so cut are then fed into the heading die, where they are pushed into the die by means of a punch. With another stroke of the punch, heads of the required shape are produced. The cut blanks are thereafter polished in a revolving drum and are then fed into the hopper of a slotting machine where they are passed one by one through a revolving die and then through a revolving cutter where the slots in the head are made. The next stage, is head turning, which means cutting the head to the exact dimensions and removing the burr caused by the slotting and die marks. The slotted blanks are then again polished in a revolving drum and fed into the hopper of an automatic thread rolling machine, consisting of one stationary and one revolving die, where, as the blanks pass one by one, the threads are made. The finished machine screws are taken out from the machine and dried under heat. They are then packed in cardboard boxes of one gross each.

(b) At the public inquiry, the representative of Messrs. Guest, Keen, Williams, Ltd., Calcutta, pointed out that the indigenous machine screws were not subjected to the head turning process, viz., item (iv) of (a) above. The indigenous producers, however, stated that though this was the case until recently, they had now obtained the necessary machinery for head turning also.

8. (a) The principal raw material required for the manufacture of iron or steel machine screws is mild steel annealed wire. For machine screws of brass, gunmetal and other non-ferrous metals, brass wire or wire of the respective metals is required. The mild steel wire required is from 14 SWG to 5 SWG and it should be generally of the following composition:—

Carbon	...	...	·11
Silicon	...	...	·08
Manganese	...	...	·34
Sulphur	...	...	·043
Phosphorous	...	...	·31

Messrs. Guest, Keen, Williams, Ltd., Calcutta, have stated that they use low carbon mild steel CHQ (Cold Heading Quality) wire. The Indian Telephone Industries Ltd., Bangalore, have laid down certain specifications for the mild steel or brass wire to be used for the manufacture of machine screws required by them.

(b) The consumable stores required are :—

- (i) Die steel;
- (ii) Spring steel wire;
- (iii) Special steels;
- (iv) Chemicals; and
- (v) Packing materials.

(c) We understand that all the raw materials and consumable stores required by the industry are produced in the country. Most of the machinery required for the fabrication of machine screws is also manufactured in the country from indigenous materials. Mild steel annealed wire is manufactured by the Indian Steel and Wire Products Ltd., at Indranagar. The Mukand Iron and Steel Works, Bombay are also stated to be manufacturing mild steel wire. As regards brass wire, the screw manufacturers have stated that they either manufacture brass ingots from copper and zinc and then draw the wire in their own factories, or they buy the brass wire in the market. Messrs. Guest, Keen, Williams, Ltd., Calcutta, who, as we have already pointed out, manufacture machine screws along with bolts and nuts and other similar articles, manufacture in their factory their own requirements of mild steel wire from steel billets which are converted into rods and then drawn into wire of the required specifications. As regards die steel and other special steels, we understand from the producers that they obtain these materials from the Tata Iron and Steel Co., Ltd., Jamshedpur. There have been occasions, however, when adequate supplies were not available from Tatas and the deficit had to be made good by imports.

(d) At the public inquiry, the producers stated that they were unable to get mild steel wire of the required composition and that, as a result of this, the quality of the machine screws manufactured by them was adversely affected. They also stated that deliveries of steel, and steel wire were subject to considerable delays owing to which production was sometimes held up. The representative of the Indian Steel and Wire Products, Ltd., Indranagar, however, pointed out that his firm was supplying the industry with the proper specifications of mild steel wire and was in a position to produce any type of steel wire required by the industry. We were further assured by him that Indian Steel and Wire Products was prepared to supply the required types of steel wire to this industry in any quantity, provided the necessary quantity of steel was made available by Government. During 1950-51, Indian Steel and Wire Products supplied 495 tons of wire to screw manufacturers. The producers, however, stated that out of this quantity, only a little over 85 tons were allotted and consumed for the manufacture of machine screws, the balance being allotted for the manufacture of wood screws and other types of screws. The present annual rated capacity of the machine screw industry is about 6 lakhs gross of machine screws. Assuming that 2,000 gross of the average type of machine screws weigh one ton. We estimate that at least 300 tons of steel, or mild steel wire would be required by the industry to work upto its present rated capacity.

We recognize that since there is an acute shortage of steel in the country, it is impossible to satisfy the requirements of all industries to the full extent. Even so, we recommend that the Central and the State Governments should endeavour to meet the requirements of this industry for steel, and mild steel wire to as large an extent as possible and also take suitable steps to ensure prompt deliveries. We recommend, further, that the industry should make arrangements to pool the requirements of individual factories for the raw materials and place bulk orders with the manufacturers.

As the quality of machine screws depends on the use of the proper quality of raw materials, we recommend that the producers should approach the National Metallurgical Laboratory, Tatanagar, for assistance in testing the materials to be used in the manufacture of different types of machine screws.

(e) Among the consumable stores required by the machine screw manufacturers, die steel for the manufacture of dies and different types of special steels are important items. Without the die steel and special steels of right type, it is impossible to turn out machine screws of good quality. The indigenous producers stated that they were not able to get adequate supplies of these materials from Tatas. We recommend that sufficient imports of these materials should be permitted so as to meet the requirements of domestic industries including the machine screw industry.

9. The Ministry of Commerce and Industry, in a memorandum furnished to the Board, have stated that since imports of machine screws are not separately recorded, it is difficult to estimate the domestic demand for this article. Two leading importing firms, however, namely, Messrs. Guest, Keen, Williams, Ltd., Calcutta, and Messrs. Vulcan Trading Co., Ltd., Bombay, have supplied us with statistics of imports of machine screws into this country. These statistics relate to imports from only the principal sources of supply and are necessarily incomplete. They are partly based on the statistics maintained by the Associations of machine screw manufacturers in the exporting countries concerned and partly on actual imports into this country. Even so, they provide an indication of the level of imports and we have used them in the following table, in conjunction with the statistics of domestic production, to arrive at an approximate estimate of the domestic consumption of machine screws.

Estimated domestic consumption. (Figures in gross.)

Year	Imports into India from					Total imports	Domestic production	Total consumption (approximate) (cols. 7 + 8) (9)
	U. K.		Belgium	Sweden	Western Germany			
	Mild steel (2)	Brass (3)						
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1948	2,10,503	8,947	N. A.	1,00,293	N. A.	3,19,833	1,22,008	4,41,841
1949	69,799	6,356	14,000	48,200	N. A.	1,38,855	94,965	2,33,820
1950	69,685	1,922	3,17,055	14,743	N. A.	4,03,405	1,73,715	5,77,120
1951 1st quarter.)	79,846	600	48,000	N. A.	2,50,000	3,78,446		

[N.A.—Not available.]

Imports of machine screws into India from the U.K., Belgium, Sweden and Western Germany were 3.20 lakhs gross in 1948, 1.38 lakhs gross in 1949, 4.03 lakhs gross in 1950 and 3.78 lakhs gross in the first quarter of 1951. Imports in 1949 were abnormally low, particularly because of import control restrictions, whereas during the first quarter of 1951 imports were abnormally high, owing to the liberal import control policy. It was agreed at the public inquiry that for the purpose of estimating the normal consumption of machine screws in India, the figures of imports for 1948 and 1950 alone should be taken into consideration. Adding the figures of domestic production in 1948 and 1950 to the corresponding figures of imports, it is found that the consumption of machine screws in India was in the neighbourhood of 4.42 lakhs gross in 1948 and 5.77 lakhs gross in 1950. Taking the average of these two figures, the average annual consumption of machine screws in India works out to 5.09 lakhs gross or about 5 lakhs gross. These figures include all types of machine screws, including those made of brass, gun-metal or other non-ferrous metals but do not include the consumption of those industrial establishments which manufacture their own requirements of machine screws such as, the Indian Telephone Industries Ltd., Bangalore, manufacturers of cycles, electric fans, etc., and the Ordnance factories. With the progress of industrial development the demand of machine screws is steadily increasing. We, therefore, think that in the next two or three years the demand for machine screws in India, excluding the requirements of those establishments which manufacture their own requirements of machine screws, may be put at 6 lakhs gross per annum.

10. (a) The information regarding the annual rated capacity and actual production of machine screws in India during 1948, 1949 and 1950 which has been furnished to us by some of the manufacturers is given in the following statement:—

Statement showing the annual rated capacity and actual production of machine screws during 1948, 1949 and 1950 as furnished by some of the manufacturers.

S. No.	Name of factory	Annual rated capacity	Production (gross)		
			1948	1949	1950
1	Jagatjit Engineering Works Karpurthala.	84,000	11,418*	25,536*	48,615*
2	Universal Screw Factory, Amritsar.	2,50,000	84,540	62,379	1,25,100
3	K. B. Engineering Co. Ltd., Amritsar.	60,000	Nil	3,000	Nil
4	National Engineers' Corporation, Amritsar.	26,000	Nil	Nil	Nil
5	Victor Industries, Amritsar	6,000	5,350	4,050	Nil
6	Northern India Steel Works, Verka, Amritsar.	20,000	Nil	Nil	Nil
7	Dun Aluminium Factory, Bombay.	1,20,000	20,760	Nil	Nil
Total		5,66,000	1,22,068	94,965	1,73,715

It will be observed that the total annual rated capacity of the factories mentioned in the statement is 5.66 lakhs gross. This includes two factories, namely, the National Engineers' Corporation, Amritsar, and the Northern India Steel Works, Verka, Amritsar, which have not produced any machine screws during the last three years, though they possess the

* [These figures relate to financial years and not calendar years.]

capacity for the manufacture of such screws. The National Engineers' Corporation manufactured 26,000 gross machine screws in 1946-47. Similarly, the Dun Aluminium Factory, Bombay, possesses an annual capacity of 1.2 lakhs gross, but manufactured about 20,700 gross only in 1948. As stated earlier, there is one factory in Calcutta, namely, Hind Wire Industries, Ltd., two factories in Delhi, namely, Messrs. Bhadwar & Co., and another belonging to Messrs. Jai Krishna Das, and one in Nagpur, namely, Metalfold Industries, which possess machinery for the manufacture of machine screws, but they have not yet gone into production and their annual rated capacities are not known to the Board. Messrs. Guest, Keen, Williams, Ltd., Calcutta, also manufacture machine screws, but have not supplied us with figures of their capacity or production on the ground that they are chiefly interested in the manufacture of bolts and nuts and that the production of machine screws forms a very small proportion of their total production. On the basis of the available evidence, we estimate the annual rated capacity of the industry at about 6 lakhs gross. In this estimate we have not taken into account the capacities of the Ordnance factories and industrial establishments which manufacture machine screws for their own consumption.

(b) As regards actual production, only two factories, namely, the Jagatjit Engineering Works, Kupurthala, and the Universal Screw Factory, Amritsar, have been in continuous production. However, taking into account the production of other factories also, the total production of machine screws in India amounted to 1,22,008 gross in 1948, 94,965 gross in 1949 and 1,73,715 gross in 1950. These figures include the production of brass machine screws, but do not include the production of machine screws in Ordnance factories and other industrial establishments which produce such screws for their own consumption.

11. The Board has received divergent opinions about the quality of the indigenous product. The majority of the importers and consumers have stated that the indigenous machine screws are not durable and that their quality is generally far below the standard of imported machine screws. They have pointed out that indigenous machine screws suffer from various defects, such as lack of uniform threading, improper formation of the slot and poor finish. The material is also said to be not sufficiently strong. Some of the consumers have complained that indigenous machine screws are manufactured from black bars, whereas imported machine screws are made from bright bars. The producers, on the other hand, have maintained that their products are fully comparable in quality with the imported products and that the tests carried out by the Government Test House, Alipore, have confirmed that indigenous machine screws are in no way inferior to those manufactured by such reputed British firms, as Messrs. Guest, Keen and Nettlefolds (Midlands) Ltd., Birmingham. As regards the contention that indigenous machine screws were not manufactured from bright bars, the producers have maintained that they have generally been using bright bars only for the manufacture of their machine screws. The representatives of the Indian Steel and Wire Products Ltd., have also informed the Board that the wire supplied by them to the machine screw industry conformed strictly to the specifications prescribed for these products. These opposite points of view were discussed at the public inquiry and it was generally agreed that so far as the varieties in common use were concerned, the quality of the indigenous products was satisfactory and

comparable to that of the corresponding varieties of imported machine screws. We think, however, that there is still considerable scope for improvement and that, with improved equipment, better technical supervision and an adequate provision for research, the industry can turn out a product which will give still greater satisfaction to the consumer. We also think that the adoption of standard specifications will greatly assist in improving the quality of indigenous machine screws. We, therefore, recommend that the Indian Standards Institution should take up the question of evolving such specifications for the products of this industry at an early date.

12.—(a) *Imports*.—As stated earlier, imports of machine screws are not separately recorded in the Accounts relating to the Sea-Borne Trade and Navigation of India. Statistics of imports from certain countries were, however, furnished to us by some of the importers for the years 1948, 1949 and 1950 and the first quarter of 1951 and these have been given in paragraph 9 of this Report. During the period 1949-50, imports of machine screws were low as a result of the import restrictions. We have been informed that in consequence of a liberal import licensing policy for machine screws, there have been considerable imports of this article in the first quarter of 1951. Machine screws are at present imported principally from the United Kingdom, Belgium, Sweden and Western Germany. In order to enable a careful watch to be maintained over the import position, we recommend that arrangements should be made with the Director-General of Commercial Intelligence and Statistics, and the Collectors of Customs to record in future imports of machine screws separately under the following heads:—

Machine screws:

- (i) Iron or steel.
- (ii) Brass.
- (iii) Other non-ferrous metals.

(b) *Import control policy*.—The changes in import control policy in respect of machine screws at different periods are briefly described below:—

(i) *Until December, 1949*.—Imports of machine screws were licensed by the Iron and Steel Controller, Calcutta, until December, 1949.

(ii) *January-June, 1950*.—From January, 1950, the work of licensing imports of machine screws was transferred to the Deputy Chief Controller of Imports (Steel Branch) subject to the authority exercised by the Iron and Steel Controller. Licences were issued subject to the availability of foreign exchange. Preference was accorded to actual users and to dealers who supported their applications with definite orders from actual users. The terms and conditions of the foreign suppliers' offers forwarded by the applicants when making their applications were considered as a basis. No application not supported by definite orders on suppliers abroad or their agents were considered. Licences were not issued on any fixed quota basis, such as is normally adopted by the Chief Controller of imports.

(iii) *July-December, 1950*.—During this period, imports of machine screws from soft currency sources were licensed to established importers up to 40 per cent. of one half of their best year's imports and licences to actual users were issued up to their 6 months' requirements.

As regards imports from the dollar and other hard currency countries, applications from actual users or dealers having orders from actual users were also considered for such of the types of the goods as were certified by the Iron and Steel Controller as essential.

(iv) *January-June, 1951.*—Imports of machine screws from soft currency sources were allowed to established importers up to 80 per cent. of one half of their best year's imports and licences to actual users were issued up to their 6 months' requirements. General licences for machine screws were issued to actual users only on production of proof of non-availability from soft currency sources.

(v) *July-December, 1951.*—Imports of machine screws are freely allowed from all, except hard currency, sources. General licences are to be issued to actual users only on production of proof of non-availability from soft currency sources.

13. Iron or steel machine screws are at present assessed to duty under Item No. 63 (12)A of the First schedule of the Indian Customs Tariff (34th Issue) which relates to iron or steel bolts and nuts, excluding fish bolts and nuts. The relevant extract from the Customs Tariff is reproduced below:—

Item No.	Name of article	Nature of duty	Standard rate of duty	Preferential rate of duty if the article is the produce or manufacture of		
				The U.K.	A British Colony	Burma
(1)	(2)	(3)	(4)	(5)	(6)	(7)
63(12)	A. Iron or Steel bolts and nuts, including hook-bolts and nuts for roofing but excluding fish bolts and nuts :— (i) of British manufacture (a)	Revenue	1½ times the excise duty leviable for the time being on steel ingots produced in India (b) or 10 per cent. <i>ad valorem</i> , whichever is higher, plus one-fourth of the total duty.	..	..	Free.

(a) Under Government of India Finance Department (Central Revenue) Notification No. 33, dated the 22nd June, 1935, iron or steel bolt and nuts of British manufacture, including hook-bolts and nuts for roofing but excluding fish bolts and nuts are exempt from so much of the duty as is in excess of Rs. 46-9-0 per ton.

(b) The rate of excise duty on 1st January, 1951, and until further notice on all steel ingots, produced in India, is Rs. 4 per ton.

(1)	(2)	(3)	(4)	(5)	(6)	(7)
	(ii) not of British Manufacture	Revenue	1½ times the excise duty leviable for the time being on steel ingots produced in India (b) plus Rs. 1-9-0 per cwt., plus one-fourth of the total duty.	..	..	..

(b) The rate of excise duty on 1st January, 1951, and until further notice on all steel ingots, produced in India, is Rs. 4 per ton.

14. The Universal Screw Factory, Chheharta, Amritsar, and the Jagatjit Engineering Works, Kapurthala, are the only two firms manufacturing M.S. machine screws at present. Both are proprietary firms. The former was established in 1941 and the latter in 1945. Both manufacture M.S. machine screws, largely in two diameters, viz., 3/16" and 1/4", in different lengths. For the purpose of investigating the actual costs of production, 6 popular sizes were selected, 3 under each diameter, and out of these 2 most popular sizes, viz., 3/16" x 3/4" and 1/4" x 1", were selected for the purpose of estimating the measure of protection required. The actual costs of production were determined for the year 1950-51 and the future costs were estimated for the year 1951-52. During 1950-51, production in both the factories was well below their rated capacities and consequently, the costs were high. The manufacturers desired that the details of their costs of production should not be published and hence such details have been excluded from this Report, but they are being forwarded to Government in a separate confidential enclosure to this Report*. As the costs of production in the two firms do not show a wide variation, we have taken the average of the costs of round head and rolled thread mild steel machine screws of the size 3/16" x 3/4" in the two firms as being representative costs for the industry as a whole. We have taken the cost data for 1/4" x 1" size of round head and rolled thread mild steel machine screws of one firm which is manufacturing this size. The estimates of the future costs are based on the following considerations:—

- (i) Production during 1951-52 is expected to be 72,000 gross machine screws in the case of the Jagatjit Engineering Works and 1,50,000 gross in the case of the Universal Screw Factory, on the basis of double-shift working.
- (ii) M.S. wires No. 5 and No. 8 are required for the manufacture of machine screws. The latest prices paid for these wires, as shown below, have been adopted for estimating future costs:—

	No. 5	No. 8
	Rs.	Rs.
(a) Cost per ton	665.94	655.05
(b) Cost per lb.	0.293	0.297

* Not printed.

(iii) Wastage of materials has been allowed at 5 per cent. of the weight of the finished products.

(iv) Labour and other operating expenses have been estimated on the basis of the actual costs ruling in 1950-51 after making suitable adjustments for the increased production expected in 1951-52. The allowance claimed by the manufacturers on account of salaries for the proprietors has been disallowed, as we consider that no such allowance is justified in the case of proprietary firms.

(v) Interest on working capital has been allowed at 4 per cent. per annum on three months' costs of production.

(vi) Return on stock has been allowed at the rate of 10 per cent. on the value of the gross stock.

On the above basis, the fair selling prices of round head and rolled thread mild steel machine screws for the year 1951-52 are estimated at Rs. 1-2-3 per gross for the size 3/16" x 3/4" and Rs. 1-10-8 per gross for the size of 1/4" x 1", the details being as follows:—

Board's estimate of the fair selling prices per gross of round head and rolled thread M. S. machine screws for the year 1951-52.

	Size of machine screws	
	Dia. x length	Dia. x length
	3/16" x 3/4"	1/4" x 1"
	Rs.	Rs.
1. Raw materials M.S. Wire	*0.281	*0.692
2. Power and fuel	0.020	0.021
3. Labour	0.453	0.447
4. Repairs, maintenance and consumable stores	0.158	0.193
5. Establishment	0.061	0.060
*Quantity in lbs. (including wastage at 5%)	0.946	2.363
Rate per lb	Rs. 0.297	0.293
Value	Rs. 0.281	0.692

	Size of machine screws	
	Dia. × Length	Dia. × length
	3/16" × 3/4"	1/4" × 1"
	Rs.	Rs.
6. Depreciation	0·029	0·034
7. Other overheads	0·028	0·027
8. Packing charges	0·050	0·115
9. Interest on working capital @ 4 per cent. on 3 months' cost of production.	0·011	0·016
10. Cost of production	0·091	1·605
11. Return on block @ 10 per cent.	0·051	0·061
12. Fair selling price	1·142	1·666
or Rs.	1-2-3	1-10-8

15. The c.i.f. prices of machine screws imported from the United Kingdom, Belgium and Sweden as furnished by the Collectors of Customs and importers are shown in a statement given in Appendix V. It will be seen from these figures that the current c.i.f. prices are the highest for the U.K. and the lowest for Sweden. We understand that the prices in foreign countries are generally on the upgrade and that imports from Belgium were larger than those from Sweden in 1950. The prices of Belgian machine screws are intermediate between those of the U.K. machine screws and Swedish machine screws. The Board has, therefore, adopted the current c.i.f. prices of Belgian machine screws furnished by the Collector of Customs, Bombay for the purpose of comparison with the fair selling prices of indigenous machine screws. At the public inquiry, the indigenous manufacturers of machine screws contended that in determining the c.i.f. prices of imported machine screws, due allowance should be made for the discounts allowed by the exporting firms in foreign countries to the importers in this country. We have examined the data regarding the c.i.f. prices for Bombay in consultation with the Assistant Collector of Customs, Bombay, and are satisfied that the c.i.f. prices supplied to us are net prices, i.e., after deducting the discount.

16. The following table gives a comparison of the fair selling prices of indigenous machine screws with the landed costs of imported machine screws:—

	Size of machine screws (per gross)					
	Dia. × Length			Dia. × Length		
	3/16" × 3/4"			1/4" × 1"		
	Rs.	As.	Ps.	Rs.	As.	Ps.
(a) Fair selling price	1	2	3	1	10	8
(b) C. i. f. prices (for imports from Belgium)	0	13	0	1	9	0
(c) Clearing charges	0	0	2	0	0	3
(d) Total landed cost without duty	0	13	2	1	9	3
(e) Difference between fair selling price and landed cost without duty (a)-(d).	0	5	1	0	1	5
(f) Difference (e) as a percentage on (b), the c. i. f. price	39.10%			5.67%		

The above comparison shows that the duty required is 39.10 per cent. in the case of round head and rolled thread mild steel machine screws of 3/16" × 3/4" size and 5.67 per cent. in the case of round head and rolled thread mild steel machine screws of 1/4" × 1" size.

17. (a) We understand that the domestic demand for the two sizes of machine screws selected by us for the purpose of determining the quantum of protection, namely, 3/16" × 3/4" and 1/4" × 1" is generally in the ratio of 3:1. On the basis of this ratio, the weighted average of the rates of duties required for these two sizes of machine screws works out to 30.74 per cent. *ad valorem*. It is desirable that iron or steel machine screws should bear a similar rate of duty to that applicable to brass and other non-ferrous machine screws and wood screws. We accordingly recommend that iron or steel machine screws should be shown against a new item in the Tariff Schedule and that a protective duty at the rate of 30 per cent. *ad valorem* (or 31½ per cent. inclusive of surcharge) be levied thereon, in place of the existing maximum duty of Rs. 46-9-0 per ton. In this connection, it may be pointed out the present maximum duty of Rs. 46-9-0 per ton of iron or steel machine screws, of both British and non-British manufacture, works out from 2 per cent. to 3½ per cent. of the current c.i.f. prices of the various sizes of iron or steel machine screws. The duty on brass and other non-ferrous machine screws and wood screws is, however, 31½ per cent. We see no justification for levying such widely different rates of duty on iron or steel machine screws on the one hand and on brass and other non-ferrous machine screws and wood screws on the other. Our proposal to raise the duty on iron or steel machine screws from Rs. 46-9-0 per ton to an *ad valorem* rate of 30 per cent. (or 31½ per cent. inclusive of surcharge) will remove this anomaly.

(b) The protective duty recommended above should remain in force for a period of three years.

(c) If the above proposals are accepted, the following changes will have to be made in the existing Tariff Schedule:—

Proposed changes in the existing Indian Customs Tariff schedule

Item No.	Name of article	Nature of duty	Standard rate of duty	Preferential rate of duty if the articles is the produce or manufacture of			Duration of protective rates of duty
				The U.K.	A British colony.	Burma	
63(12)	A. Iron or Steel bolts and nuts, including hook-bolts and nuts for roofing but excluding fish bolts and nuts :						Free
	(i) of British manufacture (a)	Revenue	1½ times the excise duty leviable for the time being on steel ingots produced in India (b) or 10 per cent. <i>ad valorem</i> , whichever is higher, plus one-fourth of the total duty.				
	(ii) not of British manufacture	Revenue	1½ times the excise duty leviable for the time being on steel ingots produced in India (b) plus Rs. 1-3-0 per cwt., plus one-fourth of the total duty.				
63(33)	Iron or Steel Wood Screws	Protective	31½ per cent. <i>ad valorem</i>				Free · December 31st, 1951.

(a) Under Government of India, Finance Department (Central Revenues), Notification No. 33, dated the 22nd June, 1935, iron or steel bolts and nuts of British manufacture, including hook-bolts and nuts for roofing but excluding fish bolts and nuts are exempt from so much of the duty as is in excess of Rs. 46-9-0 per ton.

(b) The rate of excise duty on the 1st January, 1951, and until further notice, on all steel ingots, produced in India is Rs. 4 per ton.

INDIAN CUSTOMS TARIFF SCHEDULE

PROPOSED SCHEDULE

Item No.	Name of article.	Nature of duty	Standard rate of duty	Preferential rate of duty if the article is the produce or manufacture of		Duration of protective rates of duty
				The U.K.	A British Colony	
63(12)A.	Iron or Steel bolts and nuts, including hook-bolts and nuts for roofing but excluding fish bolts and nuts, and machine screws:					Free
	(i) of British manufacture	(a) Revenue	1½ times the excise duty leviable for the time being on steel ingots produced in India (b) or 10 per cent. <i>ad valorem</i> whichever is higher, <i>plus</i> one fourth of the total duty.			
	(ii) not of British manufacture	Revenue	1½ times the excise duty leviable for the time being on steel ingots produced in India (b) <i>plus</i> Rs. 1-9-0 per cwt., <i>plus</i> one fourth of the total duty.			
63(33)	(a) Iron or Steel Wood Screws	Protective	31½ per cent. <i>ad valorem</i>	..	..	Free
						December 31st, 1951
	(b) Iron or Steel Machine Screws	Protective	31½ per cent. <i>ad valorem</i>	..	..	.. (Three years)

(a) Under Government of India, Finance Department (Central Revenues), Notification No. 33 dated the 22nd June, 1935, iron or steel bolts and nuts of British manufacture, including hook-bolts and nuts for roofing but excluding fish bolts and nuts are exempt from so much of the duty as is in excess of Rs. 46-9-0 per ton.

(b) The rate of excise duty on the 1st January, 1951, and until further notice, on all steel ingots, produced in India is Rs. 4 per ton.

18. (a) The conditions to be fulfilled by the machine screw industry in order to become eligible for protection or State assistance have been stated in paragraph 2 above. The first condition to be satisfied is that the industry is established and conducted on sound business lines. The two units which are at present in continuous production were costed by our Cost Accounts Officer. From his cost report as well as from other evidence received by us, we are satisfied that the industry is established and conducted on sound business lines.

(b) The second condition to be fulfilled is that, having regard to the natural or economic advantages enjoyed by the industry and its actual or probable costs, it is likely within a reasonable time to develop sufficiently to be able to carry on successfully without protection or State assistance. It has been pointed out earlier in this Report that most of the raw materials required by this industry are available in sufficient quantities in the country to enable the existing units to produce to their maximum capacity. There is also a large home market for this product. If, as recommended by us, the industry makes co-operative arrangements for the purchase of its raw materials, its cost of production could be substantially reduced. Moreover, the measure of protection recommended by us should encourage the industry to step up its production and this will also result in lower costs. We think that the industry has excellent prospects of development and should be able to dispense with protection or State assistance within a reasonably short period. Moreover, as machine screws are required for a great variety of important industries, an undue dependence on foreign supplies is likely to cause difficulties in the event of an international emergency. We consider, therefore, that the industry fulfils the conditions mentioned in paragraph 2 above and is accordingly eligible for protection.

19. The cost of machine screws normally varies from less than 1 per cent. to above 3 per cent. of the cost of the finished products in which they are used. The levy of a protective duty of 30 per cent. *ad valorem* (or 31½ per cent. inclusive of surcharge) on iron or steel machine screws will not, therefore, impose any appreciable burden on the consumer.

20. (a) The request made by the industry for assistance in the procurement of raw materials, has been discussed earlier in the Report. In addition, the industry has asked for the following further measures of assistance:—

- (i) A total ban on imports of all types and sizes of machine screws which are manufactured in the country, on the ground that the indigenous productive capacity in respect of such machine screws is sufficient to meet the whole domestic demand. It has been represented to us that as a result of the liberal import licensing policy adopted by Government in 1951, large imports of machine screws have arrived during the first quarter of 1951 and that these are more than sufficient to meet the country's requirements for a whole year.
- (ii) Exemption from customs duty on imported raw materials, or at least refund of a part of the customs duty paid on such materials.
- (iii) Grant of transport facilities and special freight rates for transport of raw materials and finished goods.

- (iv) Facilities for the import of up-to-date machinery.
- (v) Technical assistance and the establishment of a research institute.
- (vi) Subsidy or other financial assistance.
- (vii) Government patronage.

(b) These requests are discussed below *seriatim*.

(i) *Ban on imports*.—From the estimates of rated capacity given earlier in the Report, it is clear that the indigenous industry is capable of meeting almost the whole of the domestic demand for the types of machine screws which are included within the scope of this inquiry. We would like to point out, however, that import control is maintained primarily on balance of payment grounds and is not intended to serve as an additional form of protection. Since, however, most of the demand in the country for the types of machine screws within the scope of our inquiry can be met by the indigenous manufacturers, we recommend that so long as the policy of licensing imports has to be continued for balance of payment considerations, the desirability of maintaining and expanding the indigenous production of machine screws should be kept in view and the quantum of imports regulated accordingly.

(ii) *Concessions in respect of import duties on raw materials*.—The industry does not use imported raw materials to any appreciable extent and hence any concession in respect of the duties on such materials will not make a material difference in its costs. We are, therefore, unable to recommend any such concession.

(iii) *Transport facilities and concessions*.—We recognise that since machine screws are required for general industrial consumption throughout the country, facilities and concessions for internal transport would be of material assistance in reducing the cost of production and widening the market for this article. The question has, however, to be considered from other angles also and we, therefore, recommend that the manufacturers should take up this matter directly with the transport authorities concerned.

(iv) *Facilities for procurement of machinery*.—As already stated, the industry is at present working with locally fabricated machinery. Certain special types of machinery have, however, to be imported and we recommend that Government should give the manufacturers reasonable facilities in this regard.

(v) *Technical assistance*.—We recommend that Government-sponsored research institutions should consider the possibility of undertaking research with a view to improving the quality of machine screws produced in the country. Assistance should also be given to the industry in sending its technicians abroad to study the methods of manufacture followed in foreign countries. The industry should also take steps to diversify its production by undertaking the manufacture of such varieties of machine screws as are not produced at present.

(vi) *Subsidy or other financial assistance*.—The quantum of protection already recommended by us will suffice to put the indigenous product on par with the imported product. No subsidy is, therefore, called for. We understand that some of the State Governments have schemes for affording financial assistance to small scale industries. We recommend that

applications from the machine screw industry for assistance under such schemes should receive sympathetic consideration from the State Governments.

(vii) *Government patronage*.—We consider that Government patronage offers an effective way of promoting the development of indigenous industries and we, therefore, recommend that Government Departments should, as far as possible, obtain their requirements of machine screws from indigenous producers, provided the quality is satisfactory and the price is reasonable.

21. (a) We find that there is considerable lack of knowledge amongst the consumers regarding the indigenous production of machine screws. This is due to the fact that most of the machine screw manufacturers in India do not have a proper marketing organization and have no direct contact with the consumers in the various parts of the country. We recommend that the industry should pay greater attention that it has done hitherto to developing a proper marketing organization.

(b) Most of the firms manufacturing machine screws in the country are either proprietary or partnership concerns. We recommend that such concerns should take early steps to convert themselves into public limited companies.

22. Under paragraph 2 of the late Ministry of Commerce Resolution No. 30-T(1)/48, dated 6th August, 1948, the Board is authorized to maintain a continuous watch over the progress of each protected industry. For this purpose, it is necessary that the Board should be in possession of the relevant facts and figures bearing on the development of the industry. We, therefore, recommend that all the units in the industry should submit progress reports to the Board by 31st January of every year, or at such shorter intervals as the Board may indicate later, giving information regarding production, sales, stocks, costs of production, and selling prices. Such reports should also include information regarding the supply of raw materials, the landed costs and selling prices of the imported product and other factors having a bearing on the competitive position of the industry.

Watch to be maintained over the progress of the industry.

23. Our conclusions and recommendations are summarized as follows:—

(i) Machine screws should be distinguished from both wood screws and bolts by the characteristics described in paragraph 4(a).

Summary of conclusion and recommendations.

(ii) In view of what is stated in paragraph 4(b) and (c) machine screws made from brass and other non-ferrous metals are excluded from the scope of the inquiry since they are already subject to a protective duty, and the inquiry is confined to iron or steel machine screws in all kinds of finish, with all types of heads and threads, and in all sizes. [Paragraph 4(d).]

(iii) The indigenous machine screw industry is at present largely located in the Punjab (I) and to a smaller extent in the Patiala and the East Punjab States Union, Delhi, Calcutta and Bombay. [Paragraph 5(b).]

- (iv) Machine screws are used in fitting metallic parts and equipment in general engineering, building, furniture and cabinet-ware and allied industries, and generally in all industries requiring fastenings and fittings. [Paragraph 6.]
- (v) All the raw materials and consumable stores required by the industry are produced in the country. Most of the machinery required for the fabrication of machine screws is also manufactured in the country from indigenous materials. [Paragraph 8(c).]
- (vi) The Central and the State Governments should endeavour to meet the requirements of the indigenous machine screw industry for steel, and mild steel wire to as large an extent as possible and also take suitable steps to ensure prompt deliveries. [Paragraph 8(d).]
- (vii) The industry should make arrangements to pool the requirements of individual factories for the raw materials and place bulk orders with the manufacturers. [Paragraph 8(d).]
- (viii) The producers of machine screws should approach the National Metallurgical Laboratory, Tatnagar, for assistance in testing the materials to be used in the manufacture of different types of machine screws. [Paragraph 8(d).]
- (ix) Sufficient imports of die steel and special steels should be permitted so as to meet the requirements of domestic industries including the machine screw industry. [Paragraph 8(e).]
- (x) The average annual consumption of machine screws works out to about 5 lakhs gross. These figures include all types of machine screws, including those made of brass, gun metal or other non-ferrous metals but do not include the consumption of those industrial establishments which manufacture their own requirements of machine screws such as, the Indian Telephone Industries Ltd., Bangalore, manufacturers of cycles, electric fans etc., and the Ordnance factories. [Paragraph 9.]
- (xi) In the next two or three years the demand for machine screws in India, excluding the requirements of those establishments which manufacture their own requirements of machine screws, may be put at 6 lakhs gross per annum. [Paragraph 9.]
- (xii) The annual rated capacity of the indigenous machine screw industry is about 6 lakhs gross. The total production of machine screws in India amounted to 1,22,008 gross in 1948, 94,965 gross in 1949 and 1,73,715 gross in 1950. These figures include the production of brass machine screws. These figures of rated capacity and actual production do not also include the production of machine screws in Ordnance factories and other industrial establishments which produce such screws for their own consumption. [Paragraph 10(a) and (b).]
- (xiii) It was generally agreed that so far as the varieties of machine screws in common use were concerned, the quality of the indigenous products was satisfactory, and comparable to that

of the corresponding varieties of imported machine screws. [Paragraph 11.]

- (xiv) There is still considerable scope for improvement and with improved equipment, better technical supervision and in adequate provision for research, the industry can turn out a product which will give still greater satisfaction to the consumer. [Paragraph 11.]
- (xv) The Indian Standards Institution should take up the question of evolving standard specifications for the products of this industry at an early date. [Paragraph 11.]
- (xvi) Arrangements should be made with the Director-General of Commercial Intelligence and Statistics, and the Collectors of Customs to record in future imports of machine screws separately under the following heads:—

Machine Screws:

- (i) Iron or steel;
- (ii) Brass;
- (iii) Other non-ferrous metals. [Paragraph 12(a).]
- (xvii) The fair selling prices of round head and rolled thread mild steel machine screws for the year 1951-52 are estimated at Rs. 1-2-3 per gross for the size $3/16" \times 3/4"$ and Rs. 1-10-8 per gross for the size $1/4" \times 1"$. [Paragraph 14.]
- (xviii) The Board has adopted the current c.i.f. prices of Belgian machine screws furnished by the Collector of Customs, Bombay, for the purpose of comparison with the fair selling prices of indigenous machine screws. [Paragraph 15.]
- (xix) Iron and steel machine screws should be shown against a new item in the Tariff Schedule and a protective duty at the rate of 30 per cent. *ad valorem* (or $31\frac{1}{2}$ per cent. inclusive of surcharge) be levied thereon, in place of the existing maximum duty of Rs. 46-9-0 per ton. [Paragraph 17(a).]
- (xx) There is no justification for levying widely different rates of duty on iron or steel machine screws on the one hand and on brass and other non-ferrous machine screws and wood screws on the other. The proposal to raise the duty on iron or steel machine screws from Rs. 46-9-0 per ton to an *ad valorem* rate of 30 per cent (or $31\frac{1}{2}$ per cent. inclusive of surcharge) will remove this anomaly. [Paragraph 17(a).]
- (xix) The protective duty recommended in paragraph 17(a) should remain in force for a period of three years. [Paragraph 17(b).]
- (xxii) If the proposals made in paragraph 17(a) and (b) regarding the levy of a protective duty on iron or steel machine screws under a new head in the Customs Tariff are accepted, the changes to be made in the existing Tariff Schedule will be as indicated in paragraph 17(c).

- (xxiii) The machine screw industry fulfils all the conditions laid down by Government for the grant of protection and is accordingly eligible for protection. [Paragraph 18.]
- (xxiv) The cost of machine screws normally varies from less than 1 per cent. to about 3 per cent. of the cost of the finished products in which they are used and the levy of a protective duty of 30 per cent. *ad valorem* (or 31½ per cent. inclusive of surcharge) on iron or steel machine screws will not, therefore, impose any appreciable burden on the consumer. [Paragraph 19.]
- (xxv) Since most of the demand in the country for the types of machine screws within the scope of our inquiry can be met by the indigenous manufacturers, we recommend that so long as the policy of licensing imports has to be continued for balance of payment considerations, the desirability of maintaining and expanding the indigenous production of machine screws should be kept in view and the quantum of imports regulated accordingly. [Paragraph 20 (b) (i).]
- (xxvi) We are unable to recommend any concession in respect of import duties on raw materials. [Paragraph 20 (b) (ii).]
- (xxvii) The manufacturers of machine screws should take up the matter of transport facilities and concessions directly with the transport authorities concerned. [Paragraph 20 (b) (iii).]
- (xxviii) Government should give the manufacturers of machine screws reasonable facilities for the import of special types of machinery required for the manufacture of machine screws. [Paragraph 20(b) (iv).]
- (xxix) The industry should take steps to diversify its production by undertaking the manufacture of such varieties of machine screws as are not produced at present. [Paragraph 20 (b) (v).]
- (xxx) Government Departments should, as far as possible, obtain their requirements of machine screws from indigenous producers, provided the quality is satisfactory and the price is reasonable. [Paragraph 20 (b) (vii).]
- (xxxi) The machine screw industry should pay greater attention than it has done hitherto to developing a proper marketing organization. [Paragraph 21 (a).]
- (xxxii) The firms manufacturing machine screws in the country should take early steps to convert themselves into public limited companies. [Paragraph 21 (b).]
- (xxxiii) All the units in the industry should submit progress reports to the Board by 31st January of every year or at such shorter intervals as the Board may indicate later giving information regarding production, sales, stocks, cost of production and selling prices. Such reports should also include information regarding the supply of raw materials, the landed costs and selling prices of the imported product and other factors having a bearing on the competitive position of the industry. [Paragraph 22.]

24. We wish to acknowledge the co-operation we have received from the producers, importers and consumers of machine screws and the various Associations concerned, in carrying out this inquiry. We also wish to thank Shri P. S. Rao, Assistant Development Officer (Mechanical Development Directorate) of the Ministry of Commerce and Industry (Development Wing) and Shri R. Sundaram, Cost Accounts Officer attached to the Board, for their assistance in connection with the inquiry.

H. L. DEY,
President.

B. V. NARAYANASWAMY,
Member.

B. N. ADARKAR,
Member.

M. A. MULKY,
Secretary.
BOMBAY,
28th August, 1951.



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APPENDIX I

(Vide Paragraph 1)

GOVERNMENT OF INDIA

MINISTRY OF COMMERCE

New Delhi, the 2nd December, 1950

RESOLUTION

TARIFFS

No. 1-T/A(58)49.—In pursuance of paragraphs 2 and 7 of their Resolution in the Department of Commerce No. 218-T(55)/45, dated the 3rd November 1945, and paragraph 4 of their Resolution bearing the same number, dated the 16th February, 1946, the Government of India have decided to refer to the Tariff Board for investigation applications for assistance or protection received from the following industries; namely:—

- (i) Machine screw, and
- (ii) Hydroquinone.

2. In conducting the enquiries, the Board will be guided by the principles laid down in paragraph 5 of the Resolution, dated the 3rd November 1945, referred to in paragraph 1 above.

3. Firms or persons interested in any of these industries or in industries dependent on the use of these articles who desire that their views should be considered by the Tariff Board should address their representations to the Secretary to the Board, Contractor Building, Nicol Road, Ballard Estate, Bombay 1.

S. RANGANATHAN,
Joint Secretary.

APPENDIX II

[Vide paragraph 3(a)]

List of persons or bodies to whom the Board's questionnaires were issued and from whom replies or memoranda were received.

* Indicates those who replied or sent memoranda.

** Indicates that they are not interested.

A. PRODUCERS:

1. Badhwar & Co., 24, Park Area, Karol Bagh, New Delhi.
- **2. Bombay Brass and Engineering Works, Nakodar Road, Jullunder City.
3. Dun Aluminium Factory, 225-227, Tardeo Road, Bombay.
- **4. Faridkot Screw Factory, Faridkot.
5. Gujarat Textile Co., Manek Chowk, Ahmedabad.
6. Guest, Keen, Williams, Ltd., 41, Chowringhee Road, P. O. Box No. 609, Calcutta 16.
- **7. Gun and Shell Factory, Cossipore, West Bengal.
8. Hind Screws and Metal Works, "Palms Villa", Birla Lines, Subzi Mandi, Delhi.
- *9. Hind Wire Industries Ltd., P-16, Kadakar Street, Calcutta.
- **10. Indian Engineers' Corporation Ltd., O/s Chatiwind Gate, Canal Bridge, Amritsar.
- *11. Indian Telephone Industries Ltd., Duravani Nagar, Bangalore District.
- *12. Jagatjit Engineering Works, Kapurthala.
- **13. Shree Jan Wire Products Co. Ltd., Post Box No. 48, Bedi Port Road, Jamnagar.
14. K. B. Engineering Co. Ltd., Sultanwind Road, Amritsar.
- *15. Jai Krishna Das, The Ivory Palace, Juna Masjid, Delhi.
- *16. Metalford Industries, Glass Factory Road, Bagad Gunj, Nagpur.
- *17. National Engineers' Corporation, Sultanwind Road, Amritsar.
- *18. National Industries, Sultanwind Road, Amritsar.
- *19. National Screw and Wire Products Ltd., Stephen House, 4, Dalhousie Square, Calcutta.
- *20. Northern India Steel Works Ltd., Verka, Amritsar.
21. Tee Tee Industries, G. T. Road, Amritsar.
- *22. Universal Screw Factory, Chheharta, Amritsar.
- *23. Victor Industries, Sultanwind Road, Amritsar.

B. PRODUCERS' ASSOCIATIONS:

- *1. Bharat Screw Manufacturers' Association, Chowk Pragdass, Amritsar.
2. Screw Manufacturers' Association, 35, Stephen House, 4, Dalhousie Square, East, Calcutta.

C. IMPORTERS:

1. Madanlal Aggarwal, 50, Nagdevi Street, Bombay.
2. Allied Agencies, 6, 2nd Fanaswadi Lane, Bombay.
- **3. Batliboi & Co., Forbes Street, Fort, Bombay.
4. Bombay Belting Co. Ltd., 71-A, Netaji Subhas Road, Calcutta 1.
- *5. Amritlal Coomar & Bros., 113, Monohardas Chowk, Calcutta.
6. E. A. Currim Ltd., 14, Chittaranjan Avenue (South), Calcutta 13.
- *7. P. C. Coomar & Sons (Hardware) Ltd., 145, Netaji Subhas Road, Calcutta 1.
8. Lekhraj Devraj & Co., Narayan Dhuru Street, Bombay.
9. F. E. Darukhanawalla & Co., Nagdevi Street, Bombay 3.
- **10. Chimanlal Desai & Co., Gool Mansion, Homji Street, Fort, Bombay.
- **11. P. C. Datta & Sons, "Gooptu Mansion", 71-A, Netaji Subhas Road, Calcutta.
- **12. East Asiatic Co. (India) Ltd., Shree Nivas House, P. O. Box No. 639, 27-A, Waudby Road, Fort, Bombay.
- *13. D. M. Ebrahim & Co., 151, Lohar Chawl, Bombay.
14. Abdullabhoy Fazalbhoy, 142, Sarang Street, Bombay.
- *15. Godrej and Boyce Manufacturing Co. Ltd., Lalbaugh, Parel, Bombay.
16. Hukamchand Govardhandas, 110, Narayan Dhuru Street, Bombay.
- *17. Guest, Keen, Williams, Ltd., 41, Chowringhee Road, P.O. Box No. 609, Calcutta 16.
18. Rajkumar & Gupta Ltd., 181, Nagdevi Street, Bombay 3.
19. Tarachand Gupta & Bros., Narayan Dhuru Street, Bombay.
20. Hari Industries, Hari Bhuvan, Khak Chowk, Porbandar (Saurashtra).
21. Harshadray & Co., Advani Chambers, 1st Floor, Sir Phirozshah Mehta Road, Bombay.
22. Buadas Hazarilal & Bros., 110, Narayan Dhuru Street, Bombay.
- **23. William Jacks & Co. Ltd., Hamilton House, Ballard Estate, Bombay.
- **24. Jessop & Co. Ltd., 63, Netaji Subhas Road, Calcutta.
- **25. Kishanchand Khanna & Co., 94, Bhajipala Lane, Bombay 3.
26. Harjimal Kedarnath & Co., 87, Nagdevi Cross Lane, Bombay.
27. Tirathdas Kesharam, 130, Narayan Dhuru Street, Bombay 3.
28. S.A. Mahabaleshwarwalla, 52, Khokha Bazar, Bombay.
29. Maniklal & Co., 166, Hornby Road, Fort, Bombay.
30. Chumilal B. Mehta, 7, Parvati Nivas, Church Road, Ville Parle West, Bombay 24.
- **31. Monmotho Nath Mukerjee & Sons, 113, Monohardas Chowk, Calcutta.
- **32. M. Mansukhlal & Co., 34, Netaji Subhas Road, Calcutta.

33. Mody Brothers, 52, Nagdevi Cross Lane, Bombay 3.
34. Harjimal Nandlal, 75, Nagdevi Cross Lane, Bombay 3.
- **35. Pannalal & Sons Ltd., 67, Nagdevi Cross Lane, Bombay 3.
36. Poysba Industrial Co., Advani Chambers, Sir Phirozshah Mehta Road, Fort, Bombay.
37. Prem and Sons, 30, Bibijan Street, Bombay 3.
38. Prince Morns India Ltd., Sir Phirozshah Mehta Road, Fort, Bombay.
39. P. B. Shah & Co. Ltd., 86 Netaji Subhas Road, Calcutta.
40. M. R. Shah & Co., 22, Canning Street, Calcutta.
41. Dali B. Sroff & Co., 361, Hornby Road, Fort, Bombay.
- **42. Sepulchre Brothers (India) Ltd., Taj Building, Hornby Road, Fort, Bombay.
43. Singha Brothers, 110, Narayan Dhuru Street, Bombay 3.
44. Steel Merchants Syndicate Ltd., 153, Narayan Dhuru Street, Bombay 3.
- *45. Anantrai Talakchand & Co., 78, Netaji Subhas Road, Calcutta.
46. Baslimul Tirathram, 72/74, Bhajipala Lane, Bombay 3.
47. Hirji Trikamji, 82/86, Agiary Lane, Abdul Rehman Street, Bombay 3.
- *48. S. C. Tucker, Esquire, Nettlefold's Screw Division Representative, o/o Guest, Keen, Williams, Ltd., 41, Chowringhee Road, Calcutta.
- **49. J. C. Vora & Co., 107, C. P. Tank Road, Bombay 4.
- *50. Vulcan Trading Co., Ltd., Indian Mercantile Chambers, Nicol Road, Ballard Estate, Bombay.
- **51. Wadliawaram and Brothers, Importers and Exporters, 87, Nagdevi Cross Lane, Bombay 3.
- *52. Western India Hardware Mart, 16, Narayan Dhuru Cross Lane, Bombay 3.

D. CONSUMERS:

(i) *Cycle Manufacturers—*

1. Atlas Cycle Industries Ltd., Sonapat (Near Delhi).
2. Hind Cycles Ltd., 250, Worli, Bombay.
3. Hindustan Cycle and Industrial Corporation Ltd., Phulwari Sha-reef, Patna.

(ii) *Electric goods manufacturers—*

4. Bharat Bijlee Ltd., King's Circle, Bombay.
5. "B. G." Works, Ltd., Mahesh, Rishra (West Bengal)
- *6. Crompton Parkinson (Works) Ltd., Haines Road, Worli, Bombay●
7. Kassels Ltd., Subzi Mandi, Delhi.
8. Kay Engineering Works, Kapurthala.
9. Kirloskar Brothers Ltd., Kirloskarvadi, Satara District, (Bombay State).

10. Metropole Works Ltd., Verka, Amritsar.
11. National Electrical Industries Ltd., Industrial Estate, Lalbaug, Bombay.
12. Polar Electrical Engineering Co. Ltd., Behala. (West Bengal).
13. Raghu Engineering Works, Daryaganj, Delhi.

(iii) *Electric Fan manufacturers—*

- *14. Acme Manufacturing Co. Ltd., Antop Hill, Wadala, Bombay.
15. Calcutta Electrical Manufacturing Co. Ltd., 33, Netaji Subhas Road, Calcutta.
16. Clyde Fan Co. Ltd., 21/2, Chowringhee Road, Calcutta.
17. Engineering Works of India Ltd., 135, Canning Street, Calcutta.
18. General Electrical Co. of India Ltd., Magnet House, Chittaranjan Avenue (South), Calcutta.
19. Indian Electrical Works Ltd., Diamond Harbour Road, Calcutta 8.
20. Kaycee Industries Ltd., Kamani Chambers, Ballard Estate, Bombay.
- *21. Matchwel Electricals (India) Ltd., Subzi Mandi, Delhi.

(iv) *Sewing Machine manufacturers—*

22. Delhi Sewing Machine Co. Ltd., M.J. Building, Chandni Chowk, Delhi.
- *23. Jay Engineering Works Ltd., 183A, Prince Anwar Shah Road, Dhakuria, P. O. Box No. 2156, Calcutta.
24. Khalsa Cycle Works, Nawashahar, Jullundur.
- *25. K. C. Mullick & Sons Ltd., 77/13, Dhuramtalla Street, Calcutta.
26. R. L. Seth & Co., Charkhawan, Chawri Bazar, Delhi.

(v) *Transport companies—*

- *27. Air India Ltd., New India Assurance Building, Mahatma Gandhi Road, Bombay.
- *28. Ford Motor Company of India Ltd., Swadeshi Mills Compound, New Queens Road, Bombay.
- *29. General Motors India Ltd., Sewree, Bombay.
30. Hindustan Aircraft Construction Co. Ltd., Bangalore.
31. Hindustan Motors Ltd., 8, Royal Exchange Place, Calcutta.
- *32. Premier Automobiles Ltd., Construction House, Ballard Estate, Bombay.
33. Prime Movers India Ltd., Devkaran Nanji Building, Elphinstone Circle, Fort, Bombay.
34. Society of Motor Manufacturers and Traders Ltd., Post Box 173, New Delhi.
35. Scindia Steam Navigation Co. Ltd., Scindia House, Ballard Estate, Bombay.

(vi) *Railways*—

- *36. Secretary, Railway Board, New Delhi.
- 37. Controller of Stores, B. A. Railway, Calcutta.
- *38. Controller of Stores, B. B. & C. I. Railway, Mahaluxmi, Bombay.
- *39. Controller of Stores, B. N. Railway, Calcutta.
- *40. Controller of Stores, G. I. P. Railway, Parel, Bombay.
- *41. Controller of Stores, Southern Railway, Perambur, Madras.
- *42. Controller of Stores, Southern Railway, Negapatam.
- 43. Controller of Stores, E. I. Railway, Calcutta.

(vii) *Others*—

- *44. East Indian Bolt & Nut Dealers Association, 22, Ezra Mansions, 10, Government Place, East, Calcutta.
- *45. Bombay Port Trust, Ballard Road, Ballard Estate, Bombay.
- *46. Shri Natvarlal V. Ganatra, Vidya Talkies, Indore.

E. STATE GOVERNMENTS AND ADMINISTRATIONS:

- *1. Chief Secretary to the Government of Bombay, Bombay.
- *2. Chief Secretary to the Government of West Bengal, Calcutta.
- *3. Chief Secretary to the Government of Madras, Madras.
- **4. Chief Secretary to the Government of Madhya Pradesh, Nagpur.
- 5. Chief Secretary to the Government of Uttar Pradesh, Lucknow.
- *6. Chief Secretary to the Government of East Punjab, Simla.
- 7. Chief Secretary to the Government of Assam, Shillong.
- **8. Chief Secretary to the Government of Bihar, Patna.
- **9. Chief Secretary to the Government of Orissa, Cuttack.
- 10. Chief Secretary to the Government of Madhya Bharat, Gwalior.
- 11. Chief Secretary to the Government of United States of Saurashtra, Rajkot.
- 12. Chief Secretary to the Government of Travancore Cochin, Trivandrum.
- 13. Chief Secretary to the Government of Rajasthan, Jaipur.
- *14. Chief Secretary to the Government of Punjab & East Punjab States Union, Patiala.
- **15. Chief Secretary to the Government of Vindhya Pradesh, Rewa.
- 16. Chief Secretary to the Government of His Highness the Maharaja of Mysore, Bangalore.
- **17. Chief Secretary to the Government of Hyderabad, Hyderabad (Dn.)
- **18. Chief Secretary to the Government of Bhopal, Bhopal.
- **19. Chief Secretary to the Government of Himachal Pradesh, Simla.
- *20. Chief Commissioner, Delhi.
- 21. Chief Commissioner, Ajmer-Merwar, Ajmer.
- **22. Chief Commissioner, Coorg, Mercara.

F. OTHERS :

1. All India Manufacturers' Organization, Industrial Assurance Building, Churchgate, Bombay.
2. Engineering Association of India, 23-B, Netaji Subhas Road, Calcutta.
- *3. Director General, Ordnance Factories, 6, Esplanade East, Calcutta 1.
4. Director General, Supply & Disposals, New Delhi.
- *5. Iron and Steel Controller, Government of India, 33, Netaji Subhas Road, Calcutta.
- *6. Indian Standards Institution, 19, University Road, Civil Lines, Delhi 8.

G. MANUFACTURERS OF RAW MATERIALS:

- *1. Indian Steel & Wire Products Ltd., Indranagar P.O., Tatanagar.
2. Mukand Iron & Steel Works Ltd., 51, Mahatma Gandhi Road, Fort, Bombay.



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APPENDIX III

[Vide paragraph 3 (d)]

List of persons who attended the Board's public inquiry on 13th July 1951 and gave evidence

A. PRODUCERS:

1. Shri Sankalchand G. Shah, representing, All India Manufacturers' Organization, Industrial Assurance Building, Churchgate, Bombay.
2. Shri D. V. Virmani, representing, Universal Screw Factory, Chheharta, Amritsar.
3. Shri R. D. Vidyarthi, representing, Screw Manufacturers' Association, 35, Stephen House, 4, Dalhousie Square, East, Calcutta.
4. Shri K. L. Sakhuja, representing, Jagatjit Engineering Works, Kapurthala.
5. Shri P. P. Talwar, representing, Northern India Steel Works, Sultan Wind Road, Amritsar.
6. Shri A. E. Domingo, representing, Dun Aluminium Factory, 225/227, Tardeo Road, P.O. Box 4075, Bombay.

B. IMPORTERS:

1. Mr. S. C. Tucker, representing, Guest, Keen, Williams, Ltd., P.O. Box No. 609, 41, Chowringhee Road, Calcutta.
2. Mr. R. M. Heal, Guest, Keen, Williams, Ltd., P.O. Box No. 609, 41, Chowringhee Road, Calcutta.
3. Mr. B. Astington, representing, Vulcan Trading Co. Ltd., Indian Mercantile Chambers, Nicol Road, Ballard Estate, Bombay.
4. Shri F. N. Sahiar, representing, Vulcan Trading Co. Ltd., Indian Mercantile Chambers, Nicol Road, Ballard Estate, Bombay.
5. Shri F. N. Mehta, representing, Godrej & Boyce Mfg. Co. Ltd., Lalbaug, Parel, Bombay 12.
6. Shri E. Gulamhusen, representing, D. M. Ebrahim & Co., 151, Lohar Chawl, Bombay 2.

C. CONSUMERS:

1. Shri Manilal Sheth, representing, East Indian Bolt & Nut Dealers' Association, 22, Ezra Mansions, 10, Government Place, East, Calcutta 1.
2. Mr. J. H. Yeadon, representing, Crompton Parkinson (Works) Ltd., Haines Road, Worli, Bombay 18.
3. Shri P. R. Deshpande, representing, Crompton Parkinson (Works) Ltd., Haines Road, Worli, Bombay 18.
4. Shri N. C. Killawalla, representing, Controller of Stores, G.I.P. Railway, Parel, Bombay.
5. Shri F. J. Vachha, representing, Controller of Stores, B.B. & C.I. Railway, Mahaluxmi, Bombay.
6. Shri S. K. Shah, representing, Premier Automobiles Ltd., Construction House, Ballard Estate, Bombay.

7. Shri S. M. Parekh, representing, Acme Manufacturing Co. Ltd., Antop Hill, Wadala, Bombay 19.
8. Shri P. V. Shah, representing, Acme Manufacturing Co. Ltd., Antop Hill, Wadala, Bombay 19.
9. Shri K. K. Kamath, representing, Eastern Trading & Engineering Co. Ltd., Bombay.

D. MANUFACTURERS OF RAW MATERIALS:

1. Shri I. M. Pai, representing, Indian Steel & Wire Products Ltd., Indranagar.
2. Shri R. M. Agarwal, representing, Mukand Iron & Steel Works Ltd., 51, Mahatma Gandhi Rd., Fort. Bombay.

E. GOVERNMENT OFFICIALS:

1. Shri A. J. B. Lobo, Assistant Collector of Customs, representing, Collector of Customs, Bombay.
2. Shri P. S. Rao, Assistant Development Officer, Ministry of Commerce and Industry, representing, Ministry of Commerce and Industry, (Development Wing), (Mechanical Development Directorate), Shahjahan Road, New Delhi.
3. Shri V. V. Apte, Industrial Engineer, representing, Director of Industries, Old Custom House Yard, Fort, Bombay.

APPENDIX IV

[Vide paragraph 4(b)]

List of some of the different types of machine screws manufactured by M/s. Guest, Keen and Nettlefolds (Midlands) Ltd., Birmingham

Source: Guest, Keen and Nettlefolds (Midlands) Ltd., Birmingham, Screw Department Catalogue 1948, page 59]

DESCRIPTION

1. Mild Steel Countersunk head, whitworth thread screws.
2. Mild Steel Countersunk head, fitted with square pressed nuts.
3. Mild Steel Round head, whitworth thread screws.
4. Mild Steel Round head, fitted with square pressed nuts.
5. Mild Steel Raised head, whitworth thread screws.
6. Mild Steel Cheese head, whitworth thread screws.
7. Mild Steel Square head, whitworth thread screws.
8. Mild Steel Shallow square head, whitworth thread screws.
9. Mild Steel Small square head, whitworth thread screws.
10. Mild Steel Shallow small head, whitworth thread screws.
11. Mild Steel Hexagon head, whitworth thread screws.
12. Mild Steel Shallow Small Hex. head, whit. thread screws.
13. Brass Countersunk head, whitworth thread machine screws.
14. Brass Countersunk head, fitted with square pressed nuts.
15. Brass Round head whitworth thread screws.
16. Brass Round head fitted with square pressed nuts.

17. Brass Raised head, whitworth thread screws.
18. Brass Cheese head, whitworth thread screws.
19. Brass Square head, whitworth thread screws.
20. Brass Hexagon head, whitworth thread screws.
21. Mild Steel Countersunk head machine screws B.S.F. Threads.
22. Mild Steel Round head machine screws B.S.F. Threads.
23. Mild Steel Raised head machine screws B.S.F. Threads.
24. Mild Steel Cheese head machine screws B.S.F. Threads.
25. Brass Countersunk head machine screws, B.S.F. Threads.
26. Brass Round head machine screws, B.S.F. Threads.
27. Brass Raised head machine screws, B.S.F. Threads.
28. Brass Cheese head machine screws, B.S.F. Threads.
29. "Staybrite" Stainless steel countersunk, head, whit. thread screws.
30. "Staybrite" Stainless steel Round head, whit. thread screws.
31. "Staybrite" Stainless steel Raised head, whit. thread screws.
32. "Staybrite" Stainless steel Cheese head, whit. thread screws.
33. Gun Metal countersunk head, whitworth thread screws.
34. Gun Metal Raised head, whitworth thread screws.
35. Mild steel whitworth thread shanks.
36. Mild steel whitworth thread Laying-in shanks.
37. Mild steel Ball head bolts and ball nuts.
38. Mild steel Blued sash bar screws.
39. Brass Gallery screws.
40. Mild steel band screws.
41. Brass cock screws, cheese head.
42. Brass Mushroom head tile screws cross nicked.
43. Mild steel Countersunk head B.A. thread screws.
44. Mild steel Round head B.A. thread screws.
45. Mild steel Raised head B.A. thread screws.
46. Mild steel Cheese head B.A. thread screws.
47. Brass countersunk head B.A. thread screws.
48. Brass Round head B.A. thread screws.
49. Brass Raised head B.A. thread screws.
50. Brass Cheese head B.A. thread screws.

APPENDIX V

(Vide paragraph 15)

Statement showing the break-down of landed cost into c.i.f. prices, customs duty and clearing charges with selling prices of machine screws.

(a) Mild Steel Countersunk head.

(b) Mild Steel Round head.

(c) Mild Steel Cheese head.

(d) Brass Countersunk head.

(e) Brass Round head.

S. No.	Source of information	Origin of import	Date of import	Type and Specification	c.i.f. Price	Customs duty	Clearing charges	Landed cost	Selling price
1	2	3	4	5	6	7	8	9	10
(a) Mild Steel Countersunk head									
1	Collector of Customs, Calcutta.	U. K.	May 1951	1 1/2" x 3/8" (whitworth thread)	6 3 0	0 2 9	0 1 0	6 6 9	..
		Sweden	"	1 1/2" x 3/8"	2 11 3	0 2 1	0 0 5	2 13 0	..
		"	"	3/9" x 3/8"	2 0 6	0 1 2	0 0 4	2 2 0	..
2	Guest, Keen, Williams, Ltd. Calcutta.	U. K.	Recent	3/4" x 1/4" (rolled thread)	1 3 1	0 0 6	0 0 2	1 3 9	1 6 9
		"	"	1" x 1/4" (rolled thread).	1 8 0	0 0 7	0 0 3	1 8 10	1 12 7
		"	"	1 1/4" x 5/16" (rolled thread).	2 2 10	0 1 5	0 0 7	2 4 10	2 10 4
		"	"	3/4" x 1/4" (cut thread).	2 2 2	0 0 6	0 0 2	2 2 10	2 8 1
		"	"	1 1/2" x 5/16" (cut thread)	4 11 5	0 1 5	0 0 7	4 13 5	5 9 0

1	2	3	4	5	6	7	8	9	10
					Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
3	P. C. Coomar and Sons (Hardware) Ltd., Calcutta.	U. K.	15th July 1950	$3/16" \times 1/2"$	0 12 3	0 0 6	..	0 12 9	1 0 0
	"	"	"	$1/4" \times 1/2"$	1 2 0	0 0 9	..	1 2 9	1 6 9
	"	"	"	$5/16" \times 3/4"$	1 12 0	0 1 0	..	1 13 0	2 4 3
4	*Collector of Customs, Bombay.	"	27th Apr. 1951	$1/2" \times 5/32"$	0 15 2	..	..	..	..
	"	"	"	$1" \times 3/16"$	1 6 1	..	..	..	..
	"	"	"	$1 1/2" \times 1/4"$	3 0 0	..	..	..	..
5	Collector of Customs, Madras.	West Germany	16th May 1951	$3/16" \times 1/2"$	0 8 0	46 9 0†	..	..	..
	"	"	"	$3/16" \times 1"$	0 12 5	..	..	..	..
	"	"	"	$3/16" \times 2"$	1 5 11	..	..	..	..
	"	"	"	$1" \times 2"$	2 0 11	..	..	..	..
	(bright iron whitworth thread)	"	"	$5/16" \times 2 1/2"$	2 5 9	..	..	..	..
	"	"	"	$5/16" \times 2"$	2 9 10	..	..	..	..
	"	"	"	$3/8" \times 1"$	2 8 10	..	..	..	..
	"	"	"	$3/8" \times 3"$	5 3 8	..	..	..	..
1	Collector of Customs, Calcutta.	U. K.	May 1951	$1 1/2" \times 3/8"$ (whitworth thread)	7 2 0	0 2 8	0 1 2	7 5 10	..

(b) Mild Steel Round head.

2. Collector of Customs, Bom- bay.	Belgium	Recent	$1/8" \times 1/4"$	0 15 0	..	..	..
"	"	"	$1/8" \times 3/8"$	1 0 0	..	..	..
"	"	"	$5/32" \times 3/8"$	1 4 0	..	..	..
"	"	"	$5/32" \times 1/2"$	1 4 6	..	..	..
"	"	"	$3/16" \times 3/8"$	1 8 0	..	..	..
"	"	"	$3/16" \times 1/2"$	0 11 10	..	..	..
"	"	"	$3/16" \times 3/4"$	0 13 0	..	..	..
"	"	"	$3/16" \times 1"$	0 14 2	..	..	..
"	"	"	$1/4" \times 3/8"$	2 1 0	..	..	..
"	"	"	$1/4" \times 1/2"$	1 1 6	..	..	..
"	"	"	$1/4" \times 5/8"$	2 5 0	..	..	..
"	"	"	$1/4" \times 3/4"$	1 3 10	..	..	..
"	"	"	$1/4" \times 1"$	1 9 0	..	..	..
U. K.	27th April, 1951.		$1/2" \times 1/8"$	0 13 4	..	..	..
"	"	"	$1" \times 1/8"$	1 0 11	..	..	..
"	"	"	$1 1/2" \times 5/32"$	1 9 10	..	..	..
"	"	"	$1" \times 1/4"$	2 7 0	..	..	..
"	Recent		$3/16" \times 1/2"$	1 13 10	..	..	..
"	"	"	$3/16" \times 3/4"$	2 0 8	..	..	..

*The Collector of Customs, Bombay, states that the c.i.f. prices of Belgian mild steel Counter sunk head machine screws are 10 per cent. higher than the c.i.f. prices of the corresponding sizes of Belgian mild steel Round head machine screws given under S. No. 2 of (b) below. It is further stated that German mild steel machine screws of different sizes, types of head etc. are cheaper than Belgian mild steel machine screws of corresponding varieties by about 5 to 15 per cent. due to greater discounts allowed by German firms, though the basic prices of German and Belgian machine screws are about the same.

†Customs duty per gross is not available.

1	2	3	4	5	6	7	8	9	10
	Collector of Customs, Bombay.	U. K.	Recent	3/16" × 1"	2 3 6	..	..	..	..
	"	"	"	1/4" × 1/2"	2 12 0	..	..	..	..
	"	"	"	1/4" × 3/4"	3 1 9	..	..	..	..
	"	"	"	1/4" × 1"	3 14 6	..	..	..	..
	Sweden	.	"	3/16" × 1/2"	0 10 3	..	..	..	..
	"	"	"	3/16" × 3/4"	0 11 3	..	..	..	..
	"	"	"	3/16" × 1"	0 12 1	..	..	..	..
	"	"	"	1/4" × 1/2"	0 15 1	..	..	..	..
	"	"	"	1/4" × 3/4"	1 1 1	..	..	..	..
	"	"	"	1/4" × 1"	1 5 6	..	..	..	..
3.	Guest, Keen, Williams, Ltd., Calcutta.	Germany	"	1/2" × 3/16"	0 15 0	0 0 3	0 0 1	0 15 4	..
	"	"	"	3/4" × 3/16"	1 1 0	0 0 4	0 0 2	1 1 6	..
	"	"	"	1/2" × 1/4"	1 6 5	0 0 6	0 0 3	1 7 2	..
	"	"	"	3/4" × 1/4"	1 9 2	0 0 7	0 0 3	1 10 0	..
	"	"	"	1" × 1/4"	1 15 3	0 0 9	0 0 4	2 0 4	..
	Belgium	"	"	1/2" × 3/16"	0 14 11	0 0 3	0 0 1	0 15 3	..
	"	"	"	3/4" × 3/16"	1 0 5	0 0 3	0 0 1	1 0 9	..

white worth rolled thread

"	"	1 1/2" x 1/4"	1	6	0	0	0	6	0	0	3	1	6	9	..
"	"	3/4" x 1/4"	1	8	9	0	0	9	0	0	3	1	9	9	..
"	"	1" x 1/4"	1	15	3	0	0	9	0	0	4	2	0	4	..
U. K.	"	1/2" x 3/16"	0	11	5	0	0	3	0	0	1	0	11	9	0 13 6
"	"	3/4" x 3/16"	0	12	6	0	0	4	0	0	2	0	13	0	0 14 12
"	"	1/2" x 1"	1	0	10	0	0	6	0	0	3	1	1	7	1 4 3
"	"	3/4" x 1/4"	1	3	1	0	0	7	0	0	3	1	3	11	1 6 11
"	"	1" x 1/4"	1	8	0	0	0	8	0	0	4	1	9	0	1 12 9

4. Godrej and Boyce Mfg.
Co. Ltd., Bombay.

15th August
1950.

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5. P. C. Coomar and Sons,
(Hardware) Ltd., Calcutta.

15th July,
1950.

"	"	1/4" x 1/2"	1	2	0	0	0	9	..	1	2	9	1	6	9
"	"	5/16" x 3/4"	1	12	0	0	1	0	..	1	13	0	2	4	3

(c) Mild Steel Cheese head.

1. Collector of Customs, Calcutta.

U. K.

May 1951

2. P. C. Coomar and Sons,
(Hardware) Ltd., Calcutta.

15th July,
1950

"	"	1-1/2" x 3/8" (whitworth thread)	9	0	0	0	2	9	0	1	5	9	4	2	..
"	"	3/16" x 3/4"	0	15	9	0	0	9	..	1	0	6	1	4	6

	Symbol	No.
31. Fire hose (1947)	PTB	120
32. Steel belt lacing (1947)	PTB	119
33. Ferro-silicon (1947)	PTB	116
34. Stearic acid and Oleic acid (1947).	PTB	117
35. Machine tools (1947)	PTB	114
36. Wire healds (1946)	PTB	123
37. Pickers (1948)	PTB	125
38. Motor vehicle batteries (1948)	PTB	122
39. Hydraulic brake fluid (1948)	PTB	120
40. Bobbins (1948)	PTB	125
41. Slate and slate pencils (1949)	PTB	138
42. Expanded metals (1949)	PTB	150
43. Cotton textile machinery (ring frames, spindles, spinning rings and plain looms) (1949)	PTB	167
44. Small tools (1949)	PTB	140
45. Plastics (1949)	PTB	160
46. Soda ash (1949)	PTB	165
47. Glass and glassware (1950)	PTB	174
48. Sterilised surgical catgut (1950)	PTB	184
49. Liver extract (1950)	PTB	185
50. Fountain Pen Ink (1950)	PTB	183
51. Pencils (1950)	PTB	187
52. Fine Chemicals (1950)	PTB	182
53. Sago (1950)	PTB	186
54. Belt Fasteners (1950)	PTB	189

(B) Review Cases

1. Iron and steel manufactures (1947)	PTB	106
2. Paper and paper pulp (1947)	PTB	108
3. Cotton textile manufactures (1947)	PTB	98
4. Sugar (1947)	PTB	107
5. Magnesium chloride (1948)	PTB	124
6. Silver thread and wire (1948)	PTB	126
7. Bicycles (1949)	PTB	131
8. Artificial silk (1949)	PTB	132
9. Sericulture (1949)	PTB	133
10. Alloy tool and special steel (1949)	PTB	136
11. Sodium thiosulphate, sodium sulphite and sodium bisulphite (under section 4(1) of the Tariff Act) (1949)	PTB	140
12. Calcium chloride (1948)	PTB	148

20. Starch (1949).	PTB 163
21. Bichromates (1949).	PTB 164
22. Ferro-silicon (1949).	PTB 169
23. Sewing machines (1949).	PTB 170
24. Cocoa powder and chocolate (1949).	PTB 172
25. Electric motors (1949).	PTB 166
26. Steel belt lacing (1949).	PTB 171
27. Cotton and hair belting (1949).	PTB 173
28. Calcium chloride (1950).	PTB 175
29. Sugar (1950).	PTB 179
30. Potassium permanganate (1950).	PTB 176
31. Wood screws (1950).	PTB 177
32. Dry battery (1950).	PTB 180
33. Oleic acid and stearic acid (1950).	PTB 178
34. Plywood and teacheasts (1950).	PTB 181

II. PRICE REPORTS

1. Cotton yarn and cloth prices (1948).	PTB 127
2. Paper prices (1948).	PTB 130
3. Fair ex-works prices of superphosphate (1949).	PTB 139
4. Fair retention prices of steel produced by the Tata Iron & Steel Company and the Steel Corporation of Bengal (1949).	PTB 135
5. Ex-works costs of hot metal (Iron for steel making) and fair ex-works prices of pig iron (Basic and foundry grade) (1949).	PTB 137
6. Fair retention prices of steel produced by Mysore Iron & Steel Works, Bhadravati (1949).	PTB 151
7. Fair retention prices of steel produced by the Tata Iron & Steel Company and the Steel Corporation of Bengal (1951).	PTB 205

All the above reports are available with the Manager of Publications, Civil Lines, Delhi, and the Secretary, Indian Tariff Board, Contractor Building, Nicol Road, Ballard Estate, Bombay I.